REMARKS/ARGUMENTS:

Claim 1 is canceled without prejudice. Claims 2, 3, 11, and 17 are amended. Claims 2, 3, 7, 8, and 11-22 are pending in the application. Reexamination and reconsideration of the application, as amended, are respectfully requested.

The present invention relates to an optical isolator element used to eliminate a return light created upon introducing a light emitted from a light source to various optical elements and optical fibers, a method for producing such an element, and an optical isolator using such an element. (Applicant's specification, at p.1, lines 5-9).

CLAIM OBJECTIONS:

Claim 1 stands objected to because the word "boding" should be replaced with --bonding--. This objection is moot due to the cancellation of claim 1, although the Office's suggested change is incorporated into amended claim 3, which now includes all the limitations of canceled claim 1.

CLAIM REJECTIONS UNDER 35 U.S.C § 102/§ 103:

Claims 1-3, 7, and 8 stand rejected under 35 U.S.C. § 102(e) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over Sabia (U.S. Patent Application No. 2003/0206347). This rejection is moot with respect to claim 1 due to the cancellation of this claim. The Applicant respectfully traverses this rejection as to claims 2, 3, 7, and 8. Claim 3, as amended, is as follows:

> An optical isolator element, comprising:
> at least one flat Faraday rotator, and
> at least two flat polarizers,

wherein the Faraday rotator and the polarizers are bonded to each other by van der Waals forces acting between bonding surfaces thereof,

with the bonding surfaces being brought into contact with each other while the bonding surfaces are activated such that atom bonds are present thereon,

wherein the bonding surfaces of at least either one of the Faraday rotator and the polarizers are integrally provided with films made of a soft material which is softer than a dielectric hard material.

Applicant respectfully submits that Sabia cannot anticipate or render obvious claim 3 because Sabia fails to teach or suggest that the bonding surfaces of at least either one of the Faraday rotator and the polarizers are integrally provided with films made of a soft material which is softer than a dielectric hard material.

The Office states,

"With respect to claims 2 and 3, Sabia discloses the bonding surfaces of at least either one of the Faraday rotator and the polarizers are integrally provided with an anti-reflection multilayer film made of a soft and inorganic material (par. 41)."

The Applicant respectfully disagrees. Paragraph [0041] of Sabia states,

"It will be apparent to those skilled in the art that various modifications and variations can be made to the present invention without departing from the spirit or scope of the invention. Thus, it is intended that the present invention cover modifications and variations of this invention provided they come within the scope of the appended claims and their equivalents."

The Applicant respectfully submits that the above paragraph fails to teach or suggest films of any kind, much less films made of a soft material which is softer than a dielectric hard material.

It is an aspect of the present invention that by depositing the soft material 38 on the bonding surface, the outer surface becomes softer than a dielectric hard material such as SiO_2 and TiO_2. Thus, the Faraday rotator base and the polarizer bases can be more easily bonded since the soft materials 38 are deformed upon applying pressures to the Faraday rotator base and the polarizer bases. For example, Au, Al, Ag, Cu, Sn, Zn, Ga and the like can be used as the soft material 38 in the case of a metal, whereas alloys mainly containing Si or these metals can be used in the case of a semimetal. (Applicant's specification, at p. 21, lines 10-18).

In this way, the optical isolator element 30 can be produced by the same method as the one shown in FIGS. 2, 3 and 4 even if the soft materials 38 are provided on the bonding surfaces of the Faraday rotator 2 and the polarizers 3, 4. However, bonding conditions such as a degree of flatness, a degree of vacuum and a force of pressure become less strict as compared to the first embodiment having SiO_2 or TiO_2 in the bonding surfaces, thereby presenting an advantage of easiness to bond at normal temperature. The soft material 38 may be provided either on the bonding surfaces of the Faraday rotator 2 or on those of the polarizers 3, 4. (Applicant's specification, at p. 21, line 19-p. 22, line 4).

In light of the foregoing, Applicant respectfully submits that Sabia could not have anticipated or rendered obvious claim 3 because Sabia fails to teach or suggest each and every claim limitation. Claims 2, 7, and 8 depend from claim 3, and as such include all the limitations of claim 3; and therefore, cannot be made anticipated or rendered obvious for at least the same reasons as claim 3. Withdrawal of this rejection is thus respectfully requested.

Claims 11 and 13-16 stand rejected under 35 U.S.C. § 103(a) as obvious over Sabia (U.S. Patent Application No. 2003/0206347). The Applicant respectfully traverses this rejection.

Claims 11 and 13-16, as amended, similarly require that the bonding surfaces of at least either one of the Faraday rotator and the polarizers are integrally provided with films made of a soft material which is softer than a dielectric hard material; and are therefore, patentable over Sabia for the reasons discussed above. Withdrawal of this rejection is thus respectfully requested.

Claims 12 and 17-22 stand rejected under 35 U.S.C. § 103(a) as obvious over Sabia (U.S. Patent Application No. 2003/0206347) in view of Kub et al. (U.S. Patent No. 6,153,495). The Applicant respectfully traverses this rejection.

Claims 12 and 17-22, as amended, similarly require that the bonding surfaces of at least either one of the Faraday rotator and the polarizers are integrally provided with films made of a soft material which is softer than a dielectric hard material; and are therefore, patentable over Sabia for the reasons discussed above.

Kub cannot remedy the defect of Sabia and is not relied upon by the Office for such. Instead, the Office cites Kub for teaching that the technique of smoothing by chemical mechanical polishing is useful for preparing direct bonding surfaces.

In light of the foregoing, Applicant respectfully submits that Sabia and Kub could not have rendered amended claims 12 and 17-22 obvious, because the combination of references fails to teach or suggest each and every claim limitation.

Applicant believes the foregoing amendments comply with requirements of form and thus may be admitted under 37 C.F.R. § 1.116(b). Alternatively, if these amendments are deemed to touch the merits, admission is requested under 37 C.F.R. § 1.116(c). In this connection, these amendments were not earlier presented because they are in response to the matters pointed out for the first time in the Final Office Action.

Lastly, admission is requested under 37 C.F.R. § 1.116(b) as presenting rejected claims in better form for consideration on appeal.

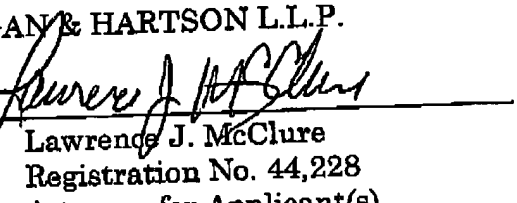
In view of the foregoing, it is respectfully submitted that the application is in condition for allowance. Reexamination and reconsideration of the application, as amended, are requested.

If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at the Los Angeles, California telephone number (213) 337-6810 to discuss the steps necessary for placing the application in condition for allowance.

If there are any fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-1314.

Respectfully submitted,
HOGAN & HARTSON L.L.P.

Date: February 16, 2006

By: 
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